GR2 Architect's Specification

The audio zone mixer shall be equipped with nine source inputs including six balanced mono microphone or line inputs and a further three unbalanced stereo line music inputs. The inputs shall be configurable as six mono mic/line plus three stereo music, or four mono mic/line plus four stereo music sources. The mixer shall have four mix buses providing one stereo and one mono zone output as well as a configurable mono aux output. The stereo zone shall be able to be switched for mono operation. The mic inputs shall be on Phoenix type plug-in barrier strips, with Mic1 duplicated on XLR for standard cable connection. The stereo line inputs shall be unbalanced on RCA female connectors. The zone and aux outputs shall be duplicated on balanced plug-in barrier strips as well as unbalanced on RCA female connectors. Mating barrier strip plugs shall be provided for installation pre-wiring. The outputs shall operate at 0dBu with drive capability of +20dBu into 600 ohms and a residual output noise lower than -88dBu.

The mixer shall include a dedicated paging channel capable of using the Mic1 input or an external page or alarm source connected to a balanced line level page input on plug-in barrier strip. A page EQ shall provide 150Hz low cut and 8kHz high cut filtering for speech intelligibility. The paging channel shall be configurable to independently duck the zone outputs by 20dB for voiceover announcements, or mute the zone sources when an alarm is triggered. The page signal shall not be affected by the zone source or level settings. A separate microphone mix channel shall be configurable to provide front panel or remote priority override of non-priority microphone sources, panel switch or remote microphone muting, and a balanced line level input to mix in an external source. The microphone mix channel shall be independently configurable as a source to each zone. It shall be possible to link units to expand the number of microphone inputs in multiples of six.

Each of the nine sources and two zones shall have a front panel rotary level control and two-colour led meter to display signal presence and peak indication 4dB below clipping. The rotary knob shall be removable and pluggable to make the setting tamperproof during normal operation as required. Switches shall be provided to independently select the music sources for each zone. Front panel leds shall indicate which source is selected to each zone. An option to mix all sources rather than select one at a time shall be provided. A front panel music mute switch shall be included. Zone level and/or source selection for each zone shall be configurable for local or remote control using 10V logic to interface with wall plates, third party controllers such as AMX or Crestron, and other custom equipment. Two RJ45 connectors shall be provided to interface with remote equipment using standard CAT5 cable. The Zone Remote shall allow daisy chain connection to wall plates or other controllers from both zones, while the Utility Remote shall allow custom wiring for remote page select, microphone mute and priority override, and fire alarm trigger.

A standard, single gang wall plate remote controller shall be available as an option. This shall be able to control music source selection and/or zone level. The controller shall be an 'intelligent' type with built-in memory and a menu of configuration settings to determine its operation. One plate may be used to control a single or both zones simultaneously, or two plates may be daisy chained for separate control of each zone. The plate shall provide the following additional functionality: Zone 2 follow zone 1 switch wiring option for room combining, switch wiring option to disable the controller functions, and a built-in infra-red sensor to work with an optional hand held remote controller. The IR remote shall add a mute function and the ability to store and recall up to four source selection / level presets. Menu options shall be available to disable the recall and/or store preset functions, and to configure the controller power up default for off, last settings or a selected preset.

All installation settings shall be on recessed front panel trimmers and switches protected behind a removable face plate. It shall be possible to replace the control knobs with blanking plugs to protect their function. It shall not be necessary to remove the mixer from its furniture or to remove its cover to configure its settings. The face plate shall provide a means of securing an application specific custom label. Trimmers shall be provided to adjust the mono input gain over a 70dB range from -10 to +60dB, and set the stereo line inputs for -10dBV or +4dBu sensitivity. Trimmers shall adjust a dedicated microphone mix EQ providing swept 20 to 400Hz high pass filter, swept 200Hz to 5kHz +/-12dB mid control, and shelving +/-12dB high frequency

control. A dedicated stereo zone EQ shall provide shelving +/-12dB 80Hz low and 10kHz high frequency control. The aux output shall include a selectable 100Hz low pass filter for sub bass control. Dip switches shall select microphone +15V phantom power and a host of installer configurable options including paging setup, mic priority enable, music priority enable and release time, music and mic routing to the two zones, and selecting the source for the aux output.

The mixer shall be built into a stylish black and silver painted 1U steel chassis with removable ears for 19" rack mount or free-standing operation. The depth shall not exceed 12" when connected. The weight shall not exceed 8lbs. A 25W mains power supply with IEC input and fuse shall be built in. The power on/off switch shall be rear panel mounted for protection. The unit shall be CE marked and ETL listed to conform with UL STD 6500 and be certified to CAN/CSA STD E60065.

The audio zone mixer shall be the Allen & Heath GR2. The standard wall plate controller shall be the Allen & Heath PL-12 with optional PL-5 infra-red hand held controller.